

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re application of               | ) |          |
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| Ippei Shake et al.                 | ) |          |
|                                    | ) |          |
| Serial No.:                        | ) | Art Unit |
| 10/585,532                         | ) | 2633     |
| Filed:                             | ) |          |
| July 10, 2006                      | ) |          |
| Confirmation No.:                  | ) |          |
| 4422                               | ) |          |
| For:                               | ) |          |
| OPTICAL SIGNAL QUALITY MONITORING  | ) |          |
| CIRCUIT AND OPTICAL SIGNAL QUALITY | ) |          |
| MONITORING METHOD                  | ) |          |

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed listed references are disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof that is not a US patent document is also enclosed.

Statement of Relevance of References Listed  
Unaccompanied by English Translation  
Under 37 CFR § 1.98(a)(3)

In accordance with 37 CFR § 1.98(a)(3), the following concise explanation of the relevance of each listed reference that is not in the English language and unaccompanied by a translation into English is provided.

Japanese Publication No. JP 09-233030: **PROBLEM TO BE SOLVED**: To provide an optical transmission reception circuit with a circuit configuration independently of a transmission bit rate. **SOLUTION**: An electrooptic conversion section 11 converts an electric signal into an optical signal and provides the output of the optical signal according to a clock signal CLK IN. A frequency voltage conversion section 13 gives a voltage proportional to a frequency of the clock signal CLK IN to an optoelectric conversion section 12. A preamplifier 21 and a main amplifier 26 amplify the received optical signal and a timing extract section 27 extracts a clock signal CLK OUT from the amplified signal. An identification recovery section 28 recovers a timing of a received signal by the clock signal CLK OUT and provides an output. The resistance of a feedback receiver 22 of the preamplifier 21 is changed according to the output voltage of the frequency voltage conversion section 13 and then the gain and the band of the preamplifier 21 are controlled. A low pass filter 23 has a configuration of an RC circuit, and the resistance of a resistor 24 changes with an output voltage of the frequency voltage conversion section 13 and hence the cut-off frequency is controlled.

Japanese Publication No. JP 10-240297: **PROBLEM TO BE SOLVED**: To obtain an acoustic signal encoding device whose quality is aurally high by suppressing quantization bits from being dispersed into plural subbands while controlling a transmission band to prevent the generation of a quantization distortion from being increased and to perform a high-quality encoding and to suppress a distortion at the time of a low bit rate from being generated. **SOLUTION**: A band dividing part 1 divides an inputted digital signal into N pieces of subband signals. A band control part 4A performs the spectrum analysis of the input signal to outputs a control signal for controlling the transmission band by prohibiting bit assignments to specified bands based on the analysis result. A bit assigning part 2A prohibits the bit assignments to the specific subbands based on the control signal from the band control part 4A with respect to the N pieces of subbands divided by the band dividing part 1 and assigns quantization bits to other subbands. A quantization part 3A quantizes other subband signals with assigned number of quantization bits.

Japanese Publication No. JP 2000-078084: **PROBLEM TO BE SOLVED**: To easily monitor the quality of optical signals with high efficiency and high accuracy by receiving the signals transmitted via an optical transmission system, identifying and reproducing the monitoring signal light out of those received signals and detecting errors based on the above monitoring signal light. **SOLUTION**: A clock extraction circuit 1 to an SOH termination circuit 7 detect the errors based on the identified and reproduced monitoring signal light and monitor the quality of transmission line of an optical communication system, i.e., the quality of a main signal STM-16. The monitoring signal light consisting of a signal STM-1 is received by a photodiode 102 having a band equivalent to the signal STM-16, a preamplifier 103 and a postamplifier 104, undergoes the band limitation via an equalizing filter 105 and is identified and reproduced by an identifier 107. The code error factor characteristic is equal to the signal STE-16 when the

receiving electric band width does not vary although the monitoring signal light is equal or not equal to the signal STM-1. Thus, the component element of this monitoring device can use a simple and small circuit of small power consumption that is used for the signal STM-1.

Japanese Publication No. JP 2002-247117: **PROBLEM TO BE SOLVED**: To provide a cable compensation method for serial digital video signals that decreases the effect of noise disturbance by attenuating an unnecessary high frequency component even when a bit rate of a serial digital video signal is low. **SOLUTION**: A bit rate detection means 1 detects a bit rate of a serial digital video signal received from a terminal A through a transmission cable and provides an output of a switching signal C corresponding to the bit rate. A control means 3 sets a cut-off frequency of a low pass filter 2 by a signal E or D corresponding to the switching signal C. A cable compensation means 4 is connected to an output of the low pass filter 2 and equalizes the amplitude of the serial digital video signal in its frequency characteristic received from the terminal A through the transmission cable.

Japanese Publication No. JP 2003-209522: **PROBLEM TO BE SOLVED**: To miniaturize an apparatus for monitoring optical signal quality degradation of an optical wavelength division multiplexed signal. **SOLUTION**: An electric signal processing for evaluating an optical signal quality parameter on the basis of an optical signal intensity distribution is turned into one system and a plurality of wavelength channels are processed altogether. To monitor the optical signal quality degradation in the optical wavelength division multiplexed signal by a simple configuration, the following configurations are used: A configuration using an optical wavelength division demultiplexer 11 and a sampling clock generator 17 to make the electric signal processing of an electric signal processor 19 into one; A configuration using an optical sampling pulse train generator, an optical multiplexer, a nonlinear optical medium, and the optical wavelength division demultiplexer to the electric signal processing of the electric signal processor into one; or a configuration using a selection wavelength control section, an optical wavelength selecting section, and the sampling clock generator to make one electric signal.

#### Non-Prior Art Document

Attached for the Examiner's consideration is a copy of an Official Notice of Rejection issued in Japanese Patent Application No. 2006-508516 and which was mailed on June 3, 2008. The Japanese '532 application is a foreign counterpart of the present application.

Dated this 5<sup>th</sup> day of August 2008.

Respectfully submitted,

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